THE HONORABLE ROBERT S. LASNIK

UNITED STATES DISTRICT COURT

WESTERN DISTRICT OF WASHINGTON

AT SEATTLE

KAELI GARNER, *et al.*,

Plaintiffs,

v.

AMAZON.COM, INC., a Delaware Corporation, and AMAZON.COM SERVICES LLC, a Delaware Limited Liability Company,

Defendants.

Case No. 2:21-cv-00750-RSL

DECLARATION OF NEDIM FRESKO

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FENWICK & WEST LLP
401 UNION STREET, 5TH FLOOR
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I, Nedim Fresko, declare as follows:

1.   I am Vice President, Alexa Devices and Developer Technologies, at Defendant Amazon.com, Inc. I have worked for Amazon since July 2012 and have served in my current role since November 2014. I am authorized to make this declaration on Amazon's behalf. I make this declaration based on personal knowledge, information, and records that Amazon keeps in the ordinary course of business and were provided to me by teams at Amazon. Based on my job responsibilities and my review of Amazon's business records, I am familiar with the information that I discuss in this declaration and, if called upon to do so, I could and would testify competently as to the matters stated here.

I.   OVERVIEW OF THE ALEXA SERVICE

2.   Alexa is a voice-controlled service developed by Amazon. In response to voice commands, the Alexa service can perform a wide and growing number of tasks and functions, like playing music, podcasts, or audiobooks; making to-do lists; setting alarms; controlling connected devices like thermostats and lights; making purchases; checking on deliveries; playing interactive games; and providing weather, traffic, sports, news, and other real-time information.

3.   Users can access and enjoy Alexa through a wide array of Alexa-enabled devices. But most of the functions Alexa performs, including speech recognition and language processing functions, are, with very limited exceptions, not conducted on the devices themselves. Instead, they are generally conducted "in the cloud"—that is, on computer servers accessed through the Internet.

4.   In most cases, users interact with the Alexa service through local Alexa-enabled devices, such as smart speakers, which act as input and output devices for the Alexa service in the cloud. Alexa-enabled devices use on-device technology to detect a "wake word," usually the word "Alexa," although users have options to change the wake word to certain other words (i.e., "Amazon," "Echo," "Ziggy," or "Computer"). Alexa-enabled devices then pass voice commands over the Internet to the Alexa service in the cloud, where the service parses and processes them to perform the requested action (e.g., playing a song, turning the lights on/off, setting a timer) or to produce a verbal response, which is transmitted back to the Alexa-enabled device and played in a

1   simulated voice.

2   5.   In developing Alexa, Amazon set out to make a better computer-user interface,

3   allowing people to access computers and online services with their voice, instead of typing on a

4   keyboard, clicking with a mouse, or tapping on a touch screen. For many people, Alexa provides

5   an intuitive and convenient way of engaging with online services and connected devices. Alexa's

6   hands-free interface also enables greater accessibility to online services, including for the elderly

7   and for people with disabilities that make it difficult to use a computer keyboard or touch screen.

8   6.   While Alexa's voice interface is innovative, voice interaction is simply a different

9   form of computer user-interface, which inherently involves a computer receiving and processing

10   user input. Like any computer system, the Alexa service needs to capture and execute user

11   instructions to function. Instead of using typed inputs on local devices or terminals, Alexa-enabled

12   devices permit users to stream voice instructions to Amazon's cloud, where the voice inputs are

13   converted, first into text and then into actionable computer instructions. Recording is an essential

14   part of the process, because sounds spoken into the air, just like keystrokes or mouse clicks, cannot

15   be compiled and analyzed to determine what they mean without first being recorded by a machine

16   that processes them.

17   7.   Alexa's wake word system was designed to make a hands-free interface for

18   computer services possible while protecting privacy and not constantly sending *all* audio to the

19   cloud. The Alexa service seeks to minimize the amount of audio that is streamed to the cloud. By

20   default, Alexa-enabled devices are designed to activate and begin streaming audio to the cloud

21   only when they detect the wake word. But wake word technology is not perfect. In a very small

22   percentage of activations, the Alexa-enabled device will mistake another phonetically similar

23   sound (like the name "Alex" or the car make "Lexus") for the wake word, causing the device to

24   activate and begin streaming audio to the cloud. These accidental activations are called "false

25   wakes."

26   8.   As discussed further below, to improve wake word accuracy, Amazon uses a

27   system called "cloud-side wake word verification." This technology uses more powerful

28   computers in the cloud to double-check the accuracy of the wake word detection that the local

device performed. If those more powerful computers are not able to confirm the presence of the wake word, the service immediately shuts off the audio stream to the cloud, truncates (shortens) the recording, and deletes the transcript. But this technology also is not perfect. The Alexa service also experiences "false rejects," which are instances where the service incorrectly determines that the wake word was not said, when in fact the user *was* trying to activate Alexa.

9.   As with all other Alexa recordings, Amazon makes recordings of suspected "false wakes" available to users and labels them as audio "not intended for Alexa" in the user interface of the Alexa app and website. This gives users transparency about what audio was sent to the cloud, and allows them to provide feedback (including when the audio *was* intended for Alexa). And, while these instances are relatively rare, Amazon is always working to improve wake word accuracy, by continually improving its wake word detection technology and adopting other measures to prevent false wakes from happening. For example, consistent with its terms and public disclosures, Amazon reviews only a small fraction of the truncated recordings that the Alexa service has flagged as potential "false wakes" to determine whether the audio stream contains the wake word. Amazon then uses that data to train the Alexa system to avoid making the same mistake in the future. Amazon also employs techniques to reduce the incidence of "media wakes," which occur when the wake word is used in advertisements, movies, or TV shows. ██████

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II.   OVERVIEW OF ALEXA-ENABLED DEVICES

10.   Amazon announced the Alexa service nearly a decade ago, in late 2014. At that time, Amazon launched the first line of Alexa-enabled smart speakers, called the Amazon Echo. Today, Amazon makes Alexa available on a wide variety of Alexa-enabled devices, including screenless Echo smart speakers; smart displays (also known as "multimodal" as they allow users to provide device inputs in many ways) like the Echo Show; Fire tablet devices; mobile devices with the Alexa app, like smartphones and tablets; Echo Auto, which allows users to access the Alexa service in their car; and Fire TV streaming media players, which allow users to access the Alexa service by pushing a button on their remote control or, more recently, by voice control. The

Alexa service is also available on some third-party devices, such as certain Sonos-branded speakers,[1] wearable technology (e.g., the Samsung Galaxy Watch), gaming consoles (e.g., Xbox), and certain vehicle makes and models.

11.   Amazon Echo smart speakers are typical Alexa-enabled devices. They consist of a speaker, microphones, buttons (to control volume, "Action" to invoke Alexa without the wake word, and microphone on/off), and a light ring. Inside an Echo smart speaker, the speaker takes up most of the space. The device also contains Wi-Fi and Bluetooth antennas. Echo devices are designed for a broad consumer audience, with limited onboard computational power and memory, which reduces their cost and makes them more affordable.

12.   Certain Alexa-enabled devices cannot be activated by a wake word at all, but instead require a user to press an Action button. For instance, some models of Fire TV devices require users to push a button on the Fire TV remote to send a voice request to Alexa.

13.   In addition to sending voice commands, users can interact with the Alexa service by typing commands and queries through the Alexa app.

14.   Users have broadly adopted all forms of Alexa-enabled devices and make use of their devices in a wide variety of ways. For example, ▮▮▮▮▮▮ Amazon accounts have set up and registered at least one Alexa-compatible vehicle, such as certain makes and models with Alexa built-in that are manufactured by Ford, Audi, and other third-party automobile manufacturers. Customers can also use certain Alexa-enabled devices, like Fire TV sticks, without having to interact with the Alexa service at all.

15.   In the ordinary course of its business, Amazon maintains a repository of Alexa user data that includes Alexa device registrations and Alexa interactions. ▮▮▮▮▮▮

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[1] Some Sonos devices—for instance, the Sonos One SL—are not Alexa-enabled at all.

[2] ▮▮▮▮▮▮

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2　██   Exhibits JJ and
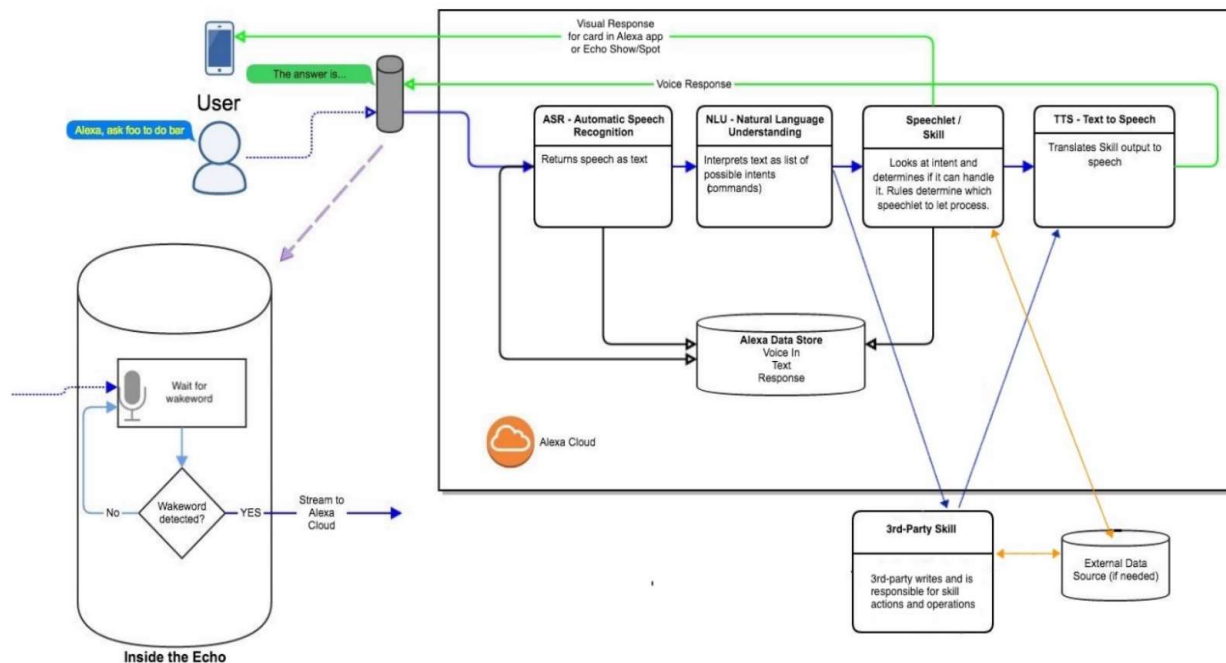
3　KK reflect confidential and commercially sensitive metrics about Alexa consumer usage patterns.

4　Amazon maintains this information as confidential and would suffer competitive harm if this

5　information were made available to the public where competitors could obtain the information.

6　**III.　HOW ALEXA WORKS**

7　　　　16.　The Alexa service operates using several components. When a user speaks to an

8　Alexa-enabled device, the device captures the audio and sends it to Amazon's cloud servers. These

9　servers (1) convert the spoken words into text through a process called Automatic Speech

10　Recognition ("ASR"); (2) analyze the text to determine the user's intent through a process called

11　Natural Language Understanding ("NLU"); (3) determine the appropriate response or action based

12　on the identified intent (e.g., playing music, setting a timer, controlling smart home devices, or

13　accessing a third-party service through an "Alexa skill"); (4) convert the response, if any, back

14　into spoken words through a process called Text-to-Speech ("TTS"); and (5) perform the action or

15　deliver any spoken response to the user, through the Alexa-enabled device.

16　　　　17.　Amazon describes the technical process by which the Alexa service works, and how

17　it processes user inputs, including in a publicly available white paper entitled "Alexa

18　Confidentiality and Data Handling Overview."　That document, produced as

19　AMZ_GARNER_00048007, is attached as **Exhibit LL**. The white paper provides an overview of

20　the Alexa system, including a diagram of the end-to-end process for responding to a request to the

21　Alexa service:

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18.   Below, I describe each step of the technological process of how Alexa works.

A.   Wake Word Detection (On-Device)

19.   For Alexa-enabled devices with wake word functionality, users typically start an Alexa interaction by saying a wake word (most commonly, "Alexa"), followed by a command or query, such as "Alexa, what time is it?" or "Alexa, set a timer for five minutes." Below, I describe the process that a typical Alexa-enabled device, an Amazon Echo smart speaker, uses to detect the wake word.

20.   Alexa-enabled devices use an on-device, acoustic keyword spotting technology designed to detect a wake word. This technology monitors acoustic patterns in the room and runs a probabilistic mathematical model to detect when a pattern is a highly likely match for the wake word. No audio is streamed to the cloud, nor is any audio recorded, unless and until the acoustic model detects a wake word with a high degree of confidence (or, alternatively, the Action or push-to-talk button on the device is pressed).

21.   By design, Echo devices generally do not retain recordings on the device itself. To enable wake word detection, a small amount of audio exists in temporary memory (RAM) as an on-device buffer, which is continuously erased and overwritten.

22.   Alexa-enabled devices are specifically designed to alert people when the device detects the wake word and is streaming audio to the cloud. Whenever an Alexa-enabled device detects the wake word, a visual or audible indicator (or both) will signal to the user that audio is streaming to the cloud for processing and recording by the Alexa service. On Echo devices, for example, the light ring turns blue to alert the user that Alexa is activated. At the user's option, Echo devices can also produce an audible tone to indicate that they have been activated. If music or other audio, such as a book or podcast, is playing on an Echo device that detects the wake word, the volume will drop, providing further notice that the wake word was detected.

23.   When the wake word is detected (or the Action button is pressed), the Alexa-enabled device starts streaming audio to the cloud. This audio stream starts with a fraction of a second of audio before the wake word, i.e., audio in the on-device buffer when the wake word is detected, and continues until the cloud-side Alexa service detects the end of a question or command and turns off the audio stream. The fraction of a second of audio before the wake word is necessary to ensure that the very beginning of the audio is properly processed by Alexa's cloud-side wake word verification processes (described below) and also provides useful context that can help identify potential "false wakes."

24.   Just as a human can "mishear" something—for example, in noisy environments or when someone's speech is quiet or garbled—an Alexa-enabled device may sometimes mistakenly detect certain audio as matching a wake word, resulting in a false wake. For example, if someone says, "A Lexus hybrid would be a good choice," the on-device wake word algorithm might (incorrectly) detect "a Lexus" as an acoustic pattern that matches the wake word. This is like when a person walking down the street thinks they hear someone call their name. False wakes can also happen based on words spoken on TV or the radio. When this happens, the Alexa-enabled device operates just as it would when it correctly detects the wake word, alerting users with the blue light, optional tone, and reducing audio volume if music or other audio is playing. Sometimes, as discussed above, an Alexa-enabled device may also mistakenly fail to detect the wake word even if it *was* spoken; this is referred to as a "false reject." Amazon continually improves the Alexa service to minimize the occurrence of false wakes *and* false rejects, including by updating the on-

1 device wake word detection algorithms automatically on a regular basis, and constantly improving

2 cloud-side wake word verification.

3   **B.**   **Wake Word Verification (Cloud-Side)**

4   25.   To reduce the incidence of "false wakes," Amazon also has implemented a layer of

5 automated cloud-side verifications to confirm the presence of the wake word. One way Amazon

6 accomplishes this is by having Alexa's server-side technology check the text transcript for an audio

7 input, that is, the output of the cloud-based ASR, to determine whether it contains the wake word.

8 If no wake word appears in the transcript, the Alexa service stops the stream.

9   26.   In 2019, Amazon also launched a program ██████████████████████ to

10 verify whether the audio stream itself, as opposed to the text transcript, contains the wake word.

11 █████████ works by performing acoustic analysis on all incoming audio streams in the cloud to

12 attempt to confirm that each stream includes a wake word. Running these additional algorithms

13 in the cloud allows the Alexa service to use far greater computer processing capacity than is

14 available locally on Echo and other Alexa-enabled devices. Cloud-based wake word verification

15 also allows models to be updated more frequently than on-device software.

16   27.   If Amazon's cloud-based verification processes are unable to confirm that the wake

17 word was spoken, the Alexa service stops processing the audio and terminates the audio stream

18 from the Alexa device. In that case, a truncated snippet of audio, i.e., only enough to determine

19 what triggered the device to activate, is saved in the cloud, both for use in improving the Alexa

20 service and wake word models and to provide users with visibility into what the Alexa device

21 recorded when the streaming indicator was activated. This truncated audio stream is labelled

22 "Audio was not intended for Alexa" in the Alexa app or website, and is saved so that the user can

23 review it later. The Alexa service will generally continue to process the request only if Amazon's

24 cloud-side processes verify the presence of the wake word.

25   28.   Both the on-device detection and cloud-side verification processes operate based

26 on probabilistic models. That means that neither process is perfect at detecting or verifying the

27 wake word. Indeed, the Alexa service makes errors in both directions: it will, at times, fail to

28 detect a wake word that was spoken or identify audio as a "false wake" when the user actually

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intended to submit a request to Alexa. For that reason, despite labeling audio as "not intended for Alexa" in the user interface, Amazon does not actually know whether a particular audio input was intended for Alexa. In sum, Alexa's detection and verification processes operate by using probabilistic, "best guess" determinations that are occasionally incorrect.

29.   Amazon does not auto-delete the truncated audio from suspected false wakes, but instead makes them available to Alexa users for review on the same basis as the rest of their Alexa audio recordings. That ensures that users have complete visibility into what audio has been sent to Amazon from their Alexa-enabled device, to understand why their devices activated, and to provide feedback to Amazon.

C.   Automatic Speech Recognition (ASR)

30.   Alongside wake word verification, the first process that occurs in the cloud for a typical Alexa interaction is converting speech input into text, using ASR models. ASR processes the input audio data streamed from an Alexa-enabled device and converts it into a text string (or set of possible text strings).

31.   ASR is a multi-step process. An acoustic model must first analyze the raw audio of a voice recording to determine what phonemes (or sounds) are present (for example, "ah-leh-x-ah"). Then, there is a lexicon that sequences the phonemes into words and a language model that parses those sequenced sounds to try to figure out the most likely word in context ("Alexa").

32.   The ASR service is built on probabilistic mathematical models. As an example, if a user asks "What is the weather in Seattle?," Alexa may determine the following phrases are possible interpretations:

- "what is the weather in seattle"
- "watt is the weather in sea addle"
- "what is the whether in cee athol"
- "watt is the whether in see at all"

33.   During the ASR process, Alexa determines the phrase with the highest likelihood of being correct, and passes that phrase along to NLU modules for processing.

34.   Alexa will keep the audio stream open until the service determines that the user has

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1   completed the command or request. This is a process called "end-pointing," which aims to

2   minimize the amount of audio streamed to the cloud. When the cloud technology determines that

3   the command has ended, it stops the stream from the Alexa-enabled device. This process uses the

4   duration of the pause between words and the context of the words being spoken to determine when

5   the user has finished speaking. Users may elect to enable "Adaptive Learning," an accessibility

6   feature that provides users with more time to finish making voice commands or requests before

7   receiving a response from Alexa. A user can also turn on an optional feature to have a tone chime

8   when the stream has ended, so that they know when audio is no longer being recorded by the cloud.

9   People who use a "push-to-talk" button (for instance, on a Fire TV remote) perform their own end-

10 pointing by letting go of the button when they are done speaking.

11   **D.   Natural Language Understanding (NLU)**

12   35.   After ASR, the text transcript is passed to Alexa's NLU. NLU interprets the

13 meaning behind user commands by identifying two key components: "intents" and

14 "entities"/"slots".

15   36.   Intents represent the action the user wants to perform, such as playing music or

16 setting a timer. The NLU system uses machine learning models trained on extensive datasets,

17 linguistic rules, and contextual analysis to identify intents. For example, verbs like "play" or "set"

18 are associated with specific actions. The system can also consider the context of previous

19 interactions to refine its understanding.

20   37.   Entities and slots are related concepts that provide context related to an intent, such

21 as names, dates, times, genres, locations, etc. Entities refer to specific pieces of information

22 extracted from a user's input that provide detail about the intended action, while slots are

23 predefined placeholders within an intent schema that are designed to capture specific types of

24 entities. For instance, in the command "Play jazz music," "jazz" is recognized as a genre of music,

25 so "jazz" would be considered the entity that fills the genre slot of a "play music" intent. NLU

26 can also use context clues to identify entities, such as understanding that "living room" is a location

27 entity in the command "Turn on the living room lights." By combining text parsing, pattern

28 matching, machine learning inference, and contextual refinement, Alexa's NLU system can

1   accurately interpret a wide range of user commands, making it highly effective in understanding

2   and responding to natural language inputs.

3   **E.   Return Response**

4   38.   After the Alexa service determines what command was given and its meaning, it

5   then determines the best action or response. Some commands produce a spoken response, while

6   other commands produce an action. For example, a request to turn on a light may cause a light to

7   go on with a confirmatory "ding" sound, whereas a request for the weather will produce a response

8   such as "currently, in Seattle, Washington, it's 55 degrees and cloudy." To generate such a

9   response, the Alexa service first generates a text response and then uses TTS technology to convert

10   the text into Alexa's synthesized voice, which is streamed from the cloud to the user's Alexa-

11   enabled device and played out loud.

12   39.   Some commands require clarification. For example, if a user says, "turn on the

13   light," but has set up more than one light with Alexa, Alexa's response may ask for clarification

14   regarding which light the user intended. When that occurs, Echo devices are designed so that the

15   blue light ring on the Echo device is lit while the device is waiting for and streaming the user's

16   response to the question.

17   40.   Like the audio and text transcription of a voice interaction, the text of Alexa's

18   response is stored in the cloud so that users can review past answers in the Alexa app or on

19   Amazon's website. In addition, the response can be used by Amazon engineers to ensure that

20   Alexa is providing relevant answers to queries and that the TTS system is properly translating the

21   text to speech.

22   41.   After an Alexa interaction is completed, the Echo device returns to monitoring for

23   a wake word, without streaming any audio to the cloud.

24   **IV.   OVERVIEW OF ALEXA SKILLS**

25   42.   The Alexa service also allows users to take advantage of "Skills." Alexa Skills

26   operate similarly to apps on a mobile phone. Skills provide additional functionality from third

27   parties, and they can extend what the Alexa service can do. Skills generally must be enabled by

28   users. Voice recordings are not shared with third-party Skill developers.

43.   Certain personal information (e.g. name, address) is not released to the third-party Skill developer unless specifically requested to be shared by the user. Amazon uses a permission framework similar to the one used by mobile devices, which requires users to grant permission to share certain data with Skill developers. For example, the ridesharing service Lyft has an Alexa Skill that allows a user to request a ride from his or her home. Accordingly, the Lyft Skill must request permission to access the address the user has set for their Echo device so that Lyft can send a ride to that location. Amazon only shares that address with Lyft after the user has granted permission.

44.   Even when a user links their Amazon account to a third-party Skill account (e.g., when a user links their account with Lyft so that Lyft always knows which Lyft account to charge rides to, or links their account with Spotify so they can play music from Spotify on their Echo smart speakers), the third-party Skill developer does not receive the audio of the user's request.

V.   HOW ALEXA USES THE POWER OF CLOUD COMPUTING

45.   The Alexa service is hosted in Amazon's cloud, and it was designed from the ground up to provide the benefits of powerful cloud computing to consumers. The Amazon cloud uses large data centers to provide on demand delivery of information technology resources (such as computing power, storage, and databases). Accordingly, voice commands and queries to Alexa generally are sent to the cloud, recorded onto servers, and processed there.

46.   There are important technical reasons why Alexa was built in the cloud. There is a vast difference between cloud computational power and the limited computational power on a local computer or local device.

47.   The demand for computing power for a service like Alexa is huge, as the service maps a sentence, identifies meaning, routes the requests to the right place, gets the response, and sends it back to the user—all in an instant. For voice interactions to be effective, responses at multiple stages must happen in milliseconds. It takes vast computational resources to make that happen.

48.   When Amazon built the Alexa service over a decade ago, the cloud was the only

feasible technology capable of scaling sufficiently to accomplish the necessary computing power. Alexa's speech recognition, natural language processing, and storage all happen in the cloud. Relatively inexpensive Echo devices cannot perform these technologically complex processes locally.

49.   By using the cloud, the Alexa service lets each customer get virtually limitless computing power through a small, affordable device, without having to buy expensive systems for their homes.   Using the cloud also allows consistent service across devices and constant improvement without devices becoming obsolete. Unlike a personal computer or smartphone, the computing power available through the Alexa service continues to grow after a customer buys an Alexa-enabled device. That means that someone who purchased a first-generation Echo smart speaker a decade ago can access largely the same Alexa service as someone who bought a new device last week.

50.   As a general matter, whenever a wake word is detected (or when Alexa is activated using push-to-talk functionality or the Action button) on an Alexa-enabled device, a temporary stream is opened, and the device begins streaming the audio of the user's command to Amazon's servers, ███████████████████████ When the Alexa service in the cloud determines that the user has finished the command, the service sends a signal back to the device to terminate the audio stream and creates a complete audio file of the Alexa interaction in the cloud. The creation and storage of this audio file occurs almost exclusively on Amazon's cloud servers in ████████████ The user can review and, if they choose, delete this audio file in their Voice History available in the Alexa app (Settings > Alexa Privacy > Review Voice History, or, on Echo Show devices: Settings > Alexa Privacy > Verify Account (i.e. Login) > Review Voice History) or website at https://www.amazon.com/alexaprivacysettings.

51.   Some newer Alexa-enabled devices, starting with fourth generation Echo devices, have new chipsets that allow them to perform locally some of what was not possible with earlier devices. In late 2020, Amazon launched a new chipset that is powerful enough to enable some local automatic speech recognition and processing.

VI.   AMAZON TERMS ACCEPTANCE FLOWS

52.   Amazon requires users to agree to terms governing their relationship with Amazon and Alexa at multiple points, including when they sign in to the Alexa app for the first time on an account, when they purchase Alexa-enabled devices on amazon.com, when they register Alexa-enabled devices, or when they set up voice profiles. At all relevant times, the Alexa-enabled device registration processes have been substantially similar to the current process described in this declaration, including the requirement for a registrant to consent to Amazon's Conditions of Use ("COUs"), the Amazon.com Privacy Notice ("Privacy Notice"), and the Alexa Terms of Use ("Alexa Terms") as an essential part of the process.

A.   Amazon Account Creation

53.   When a user activates Alexa on an Alexa-enabled device, the user must first log in to the user's Amazon account or create an Amazon account if the user does not already have one. A user creates an Amazon account in the Alexa app or on the Amazon website by clicking the "CREATE A NEW AMAZON ACCOUNT" button shown on the Sign-In screen. If the user clicks the "CREATE A NEW AMAZON ACCOUNT" button, the user is shown an Account Creation screen. The Account Creation screen on the Amazon website is substantially similar to the Account Creation screen in the Alexa app.

54.   The Account Creation screen contains text boxes for the user to enter the user's name, email address, and Amazon password:

Below the text boxes is a blue "CREATE YOUR AMAZON ACCOUNT" button, underneath which the following language appears:

> By creating an account, you agree to Amazon's Conditions of Use and Privacy Notice.

55.   The words "Conditions of Use" and "Privacy Notice" appear as hyperlinks in contrasting blue font on a white background. If the user taps the "Privacy Notice" link, the user is taken to the Amazon Privacy Notice in effect at the time of access. If the user taps the "Conditions of Use" link, the user is taken to the COUs in effect at the time of access.

56.   To create an account, the user must enter an email address (or phone number) and password. The user then must tap the blue "CREATE YOUR AMAZON ACCOUNT" button, thereby agreeing to the COUs (which incorporate the Alexa Terms by reference) and Amazon Privacy Notice.

57.   Any person who creates an Amazon account is bound by these terms.

B.   Purchasing An Alexa-Enabled Device On Amazon.com

58.   A user who purchases an Alexa-enabled device on the amazon.com marketplace must, at checkout, agree to terms governing Alexa use. After selecting an Alexa-enabled device and adding it to the cart, the user must check out. The checkout page contains a yellow button saying, "Place your order." The following text appears directly next to the "Place your order" button:

> By placing your order, you agree to Amazon's privacy notice and conditions of use.
>
> You also agree to all the terms found here.

59.   The text "Amazon's conditions of use," "privacy notice," and "here" appear as links in contrasting blue font directly next to the "Place your order" button. A true and correct copy of a screenshot of the checkout page (produced as AMZ_GARNER_00073386) is attached as **Exhibit MM**. If a user taps on the link for "Amazon's conditions of use," he or she will be directed to the version of the COUs that are in effect at the time of registration, which incorporate the Privacy Notice and Alexa Terms, in effect at the time. If a user taps on the link for "privacy notice" he or she will be directed to the version of the Privacy Notice in effect at the time. If a user taps on the "here" link, he or she will be directed to the Alexa and Alexa Device Terms screen, listing all the additional service terms that apply. That page contains clickable links to the Privacy Notice, Alexa Terms, and COUs, which incorporate the Privacy Notice and Alexa Terms, in effect at the time.

C.   Alexa Sign-in Screen

60.   After opening the Alexa app, a user is presented with a "Sign-In" screen. I understand that Plaintiffs submitted a screenshot of the Sign-In screen in their First Amended Complaint (Dkt. 59 at ¶ 95); I have reviewed this screenshot and confirm that it is substantially similar to the Sign-In screen that Amazon has presented to users during the relevant time period. The Sign-In screen contains text boxes for the user to enter the account email address (or phone number) and Amazon password:

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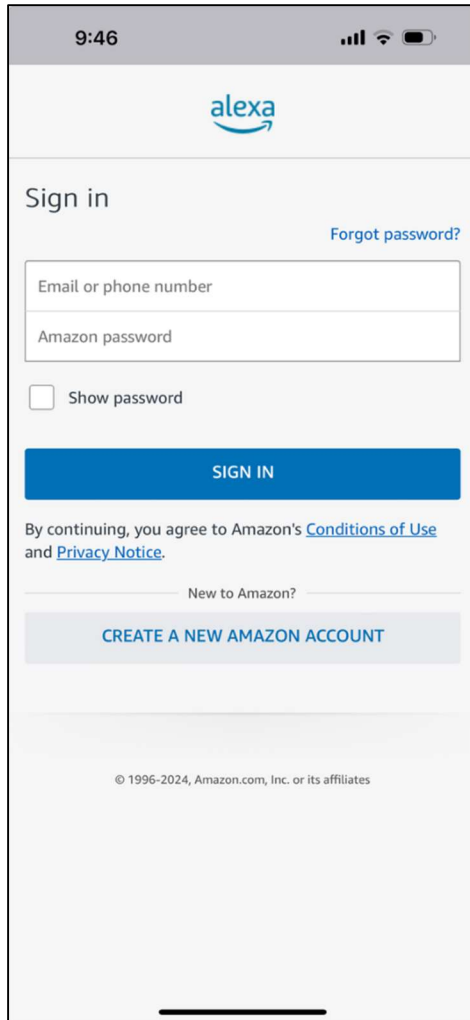
Below the text boxes is a blue "SIGN IN" button, underneath which the following language appears:

> By continuing, you agree to Amazon's Conditions of Use and Privacy Notice.

61.   The words "Conditions of Use" and "Privacy Notice" appear as links in contrasting blue font. If the user taps on the "Privacy Notice" link, he or she is directed to the then-current Privacy Notice. If the user taps on the "Conditions of Use" link, he or she is directed to the then-current version of the COUs, which incorporate the then-current Alexa Terms, and Privacy Notice.

62.   To sign in to the Alexa app, the user must enter an email address or phone number connected to an Amazon account and the password associated with that account. Then the user must tap or click on the blue "SIGN IN" button, thereby agreeing to Amazon terms.

D.　　Alexa Welcome Screen

63.　　The first time a user signs into the Alexa service on the app, Amazon presents the user with a Welcome Screen that requires the user to accept the Alexa Terms, among other agreements, and acknowledge that the Alexa service "processes and retains audio, interactions, and other data in the cloud to provide and improve our services."　A true and correct screenshot of a Welcome Screen for the Alexa app is attached as **Exhibit NN** (produced as AMZ_GARNER_00073356).　The Welcome Screen presents the user with the following text:

> Welcome to Alexa!
>
> Alexa is a cloud-based voice service. Amazon processes and retains audio, interactions, and other data in the cloud to provide and improve our services. Learn how Alexa is designed to protect your privacy. Alexa allows purchasing by voice using your default payment and shipping settings. You can set a voice confirmation code, turn off voice purchasing, and see product and order details in your Alexa app. Learn more
>
> By tapping "Agree & Continue," you agree to Amazon's Alexa Terms of Use and all the terms here.

Historically, users would be presented with a substantially similar Welcome Screen on the alexa.amazon.com website.

64.　　On the Welcome screen, the words "Learn how Alexa is designed to protect your privacy" appear as a hyperlink in contrasting blue font.　If the user taps the "Learn how Alexa is designed to protect your privacy" link, the user is taken to a page entitled "Alexa, Echo Devices, and Your Privacy."[3]　The words "Learn more" appear as a hyperlink in contrasting blue font.　If the user taps the "Learn more" link, the user is taken to a page entitled "Alexa and Alexa Device FAQs" containing additional information about operation of and privacy settings for the Alexa service.

65.　　The words "Alexa Terms of Use" and "here" appear as clickable links in contrasting blue font.　If a user taps on the "Alexa Terms of Use" link, he or she is directed to the then-current version of the Alexa Terms.　The "here" link directs a user to an "Alexa and Alexa Device Terms"

---

[3] Alexa, Echo Devices, and Your Privacy - Amazon Customer Service, *available at* https://www.amazon.com/gp/help/customer/display.html?nodeId=GVP69FUJ48X9DK8V.

1 screen, which lists all the additional terms that apply to the Alexa service. That page contains

2 clickable links to the then-current Privacy Notice and Alexa Terms. The "Alexa and Alexa Device

3 Terms" screen also contains a clickable link to the then-current COUs, which incorporate the then-

4 current Privacy Notice and Alexa Terms. While some of the language on the Welcome Screen has

5 changed over time, all versions of the Welcome Screen have included substantially similar

6 language disclosing Alexa recording practices and requiring the user to agree to the Alexa Terms.

7   **E.   Echo Device Set-up Screen**

8   66.   After continuing past the Alexa app Welcome screen, the user selects the "Devices"

9 tab and is prompted to tap "+" to add a new Alexa-enabled device. After the user taps "+" and

10 follows additional prompts to arrive at the Echo category of devices, the user is presented with a

11 screen that shows a clickable list of Echo devices. The following language is presented at the top,

12 above the list:

13   Which device would you like to set up?

14   By proceeding, you agree to Amazon's Conditions of Use and all the
        terms found here.

15

16 A true and correct screenshot of a Device Selection screen in the Alexa app is attached as **Exhibit**

17 **OO** (produced as AMZ_GARNER_00073362) to this declaration. Users could also historically

18 register Echo devices on the alexa.amazon.com website, by selecting the "Settings" tab and

19 tapping the "Set up a new device" button to add a new Alexa-enabled device, where they would

20 be presented with a substantially similar disclosure to the one in the Alexa app.

21   67.   The text "Conditions of Use" and "all the terms found here" appear as clickable

22 links in contrasting blue font directly above the list of Echo devices. If a user taps on the

23 "Conditions of Use" link, he or she is directed to the then-current version of the COUs, which

24 incorporate the then-current Privacy Notice and Alexa Terms. If a user taps on the "all the terms

25 found here" link, he or she is directed to the "Alexa and Alexa Device Terms" screen, which lists

26 all the additional service terms that apply to the Alexa service. That screen contains clickable links

27 to the then-current Privacy Notice and Alexa Terms. The "Alexa and Alexa Device Terms" screen

28 also contains a clickable link to the then-current COUs, which incorporate the then-current Privacy

1   Notice and Alexa Terms.

2   68.   To activate an Echo device from the Device Selection screen, the user must select

3   the corresponding device and proceed, thereby agreeing to these terms governing the use of the

4   Alexa service. While some of the language on the Device Selection screen has changed over time,

5   all versions of the Device Selection screen have included substantially similar language requiring

6   the user to agree to the Amazon COUs, Privacy Notice, and Alexa Terms, among other agreements,

7   before proceeding to register an Amazon Echo device.

8   **F.   Echo Show Device Registration**

9   69.   Unlike other Echo smart speaker devices, Echo Show devices have screens and thus

10   can be registered using the device touchscreen. After the user connects the Echo Show device to

11   the Internet for the first time, the user sees a sign-in screen. The user must sign in to the device

12   with his or her Amazon account. If the user does not have an Amazon account, the device screen

13   directs the customer to create one on amazon.com, through the process discussed above. After the

14   customer inputs his or her Amazon username and password on the Echo Show device and

15   completes additional setup screens, the Echo Show screen displays the Echo Show Welcome

16   screen. A compilation of true and correct screenshots and disclosures of the Echo Show Welcome

17   screens are attached as **Exhibit PP (**produced as AMZ_GARNER_00073382**).**

18   70.   As depicted in Exhibit PP**,** in the lower right-hand corner of the Echo Show

19   Welcome screen is a white button on a black background containing the word "CONTINUE" in

20   contrasting black font. Above this button, in larger white font against a black background, the

21   Echo Show Welcome screen contains the following language:

22   Hi, [User Name]!

23   This [Echo Show device] is now registered to [User Name]. By
        continuing, you agree to Amazon's Conditions of Use and all the
24   terms found here.

25

26   71.   The words "Conditions of Use" appear in contrasting blue font on a black

27   background, which hyperlinks to the COUs in effect at the time of access. The word "here" also

28   appears in contrasting blue font on a black background, which hyperlinks to the Alexa Terms and

Alexa Device Terms.

72.   If the user wishes to continue to activate and use the Echo Show device, the user must tap the "CONTINUE" button, thereby agreeing to these terms governing the use of the Alexa service, including the COUs, Privacy Notice, and Alexa Terms. While some of the language on the Echo Show Welcome screen has changed over time, all versions of the Echo Show Welcome screen have included substantially similar language requiring the user to agree to the COUs, Privacy Notice, and Alexa Terms, among other agreements, before proceeding to activate and use an Amazon Echo Show device.

73.   After signing in, the user is presented with a screen titled "Important Alexa Information," (the "Important Alexa Information screen"). Exhibit PP includes true and correct screenshot of the Important Alexa Information screen, which contains the following language:

> Important Alexa Information
>
> Amazon processes and retains audio, interactions, and other data in the cloud to provide and improve our services. Alexa allows purchasing by voice using your default payment and shipping settings. You can require a speakable confirmation code, turn off voice purchasing, and see product and order details in your Alexa app or on alexa.amazon.com. Alexa also allows you to call and message your friends and family. Learn more.

74.   On this screen, the words "Learn more" appear as a hyperlink in contrasting blue font on a black background. If the user taps the "Learn more" link, the user is taken directly to Amazon's Alexa and Alexa Device FAQs containing additional information about operation of and privacy settings for the Alexa service.

75.   While some of the language on the Important Alexa Information screen has changed over time, all versions have included substantially similar language informing the user that Amazon processes and retains audio and other data in the cloud to provide and improve Amazon's services.

G.   Fire TV Stick Device Registration

76.   A user may register a Fire TV Stick using a web browser. After connecting the Fire TV Stick to a television and the Internet, the registrant will see a screen on the TV entitled "Sign in to Your Amazon Account," which directs the registrant to visit amazon.com/code on a web

browser. This screen also contains a six-digit alphanumeric code. On a web browser, visiting the URL amazon.com/code loads an Amazon account Sign-In screen that requires the user to enter the email address and password of the user's Amazon account. Immediately below the "Sign in" button, the following language appears:

> By continuing, you agree to Amazon's Conditions of Use and Privacy Notice.

77.   The words "Conditions of Use" and "Privacy Notice" appear as links in contrasting blue font. Tapping on the "Privacy Notice" link displays the then-current Privacy Notice. Tapping on the "Conditions of Use" link displays the then-current version of the COUs, which incorporate the then-current Alexa Terms and Privacy Notice. The registrant must click the "Sign in" button to continue with registration, thereby agreeing to the Amazon terms.

78.   The user then must enter the six-digit code that is displayed on the TV to register the Fire TV Stick. Fire TV Stick users may alternatively activate the device by logging into their Amazon accounts using the Fire TV Stick remote to type in their username and passwords on the television screen.

79.   After the user logs in to their Amazon account on either a web browser or television, the following text appears on the connected TV:

> "By clicking 'Continue,' you agree to Amazon's Conditions of Use at www.amazon.com/conditionsofuse and all the terms at www.amazon.com/devicesupport or here. [•••]
>
> View Amazon's Privacy Notice here. [•••].
>
> Amazon processes and retains audio, interactions, and other data in the cloud to provide and improve our services. Alexa allows purchasing by voice using your default payment and shipping settings. You can require a speakable confirmation code, turn off voice purchasing, and see product and order details in your Alexa app or on alexa.amazon.com. Learn more. [•••]"

A true and correct screenshot of the Fire TV activation screen (produced as AMZ_GARNER_00073456) is attached as **Exhibit QQ**. While some of the language on the Fire TV activation screen has changed over time, all versions of the Fire TV activation screen have

1 included substantially similar language disclosing Alexa recording practices and requiring the user

2 to agree to Amazon terms.

3   80.   The symbol "[•••]" in the first section represents a button the registrant can click,

4 using their TV remote, to view a page titled "TERMS OF USE." That page contains clickable

5 links to the Privacy Notice, Alexa Terms, and COUs, which incorporate the then-current Privacy

6 Notice and Alexa Terms. The registrant must click the "Continue" button on the TV screen,

7 thereby agreeing to the Amazon terms.

8   **H.   Registering Sonos & Other Third-Party Devices With Alexa**

9   81.   To use the Alexa voice service on a Sonos speaker (and many other third-party

10 devices that support Alexa), a user is required to register the speaker with Alexa using both the

11 Sonos (or other applicable third-party) app and the Alexa app. A user links a Sonos speaker to

12 Alexa by first setting up the Sonos speaker through the Sonos app, and then adding Amazon Alexa

13 as a voice assistant in the Sonos app settings screen. Within the Sonos app, the Sonos user is then

14 required to tap a "Sign in to Amazon" button, which opens the Alexa app.

15   82.   The first screen displayed on the Alexa app is the Account Connection screen. This

16 contains the following language directly above a yellow button saying "Allow":

17
18   Alexa is a cloud-based voice service. Amazon processes and retains
            audio, interactions, and other data in the cloud to provide and
            improve our services. Learn how Alexa is designed to protect your
19   privacy.

20   Alexa allows purchasing by voice using your default payment and
            shipping settings. You can set a voice confirmation code, turn off
21   voice purchasing, and see product and order details in your Alexa
            app or on alexa.amazon.com. Learn more
22
23   By tapping "Allow," you agree to Amazon's Conditions of Use and
            all the terms found here.

24

25 A true and correct screenshot of the Alexa activation screen for Sonos and other third-party Alexa-

26 enabled devices (produced as AMZ_GARNER_00073886) is attached as **Exhibit RR**.

27   83.   On the Account Connection screen, the words "Learn how Alexa is designed to

28 protect your privacy" appear as a hyperlink in contrasting blue font. If the user taps the "Learn

1 how Alexa is designed to protect your privacy" link, the user is taken to a page entitled "Alexa,

2 Echo Devices, and Your Privacy." The words "Learn more" appear as a hyperlink in contrasting

3 blue font. If the user taps the "Learn more" link, the user is taken to a page entitled "Alexa and

4 Alexa Device FAQs" containing additional information about operation of and privacy settings for

5 the Alexa service.

6   84.   The text "Conditions of Use" and "all the terms found here" appear as links in

7 contrasting blue font directly above the "Allow" button. Tapping the "Conditions of Use" link

8 displays the then-current version of the COUs, which incorporate the Privacy Notice and Alexa

9 Terms. Tapping the "all the terms found here" link displays a screen listing all the additional

10 service terms that apply. That page contains clickable links to the Amazon Privacy Notice and

11 Alexa Terms, and COUs, which incorporate the Privacy Notice and Alexa Terms, in effect at the

12 time. To complete activation of Alexa on the Sonos speaker, a Sonos user is required to click the

13 "Allow" button on the activation screen. While some of the language on the Account Connection

14 screen has changed over time, all versions of the Account Connection screen have included

15 substantially similar language disclosing Alexa recording practices and requiring the user to agree

16 to Amazon terms.

17   **I.   Setting Up a Voice Profile**

18   85.   An Alexa user must intentionally create a Voice Profile, and may do so either in

19 the Alexa app or using the voice user interface of an Alexa device. A true and correct compilation

20 of screenshots of the Voice ID set-up screen (produced as AMZ_GARNER_00068028) is attached

21 as **Exhibit SS**. When someone chooses to set up a Voice Profile in the Alexa app, he or she is

22 presented with the following language on screen:

23   Set up voice ID

24   A voice ID enables Alexa to learn your voice, recognize you when
       you speak to any of your Alexa devices, and provide enhanced
25   personalization.

26
       By tapping "Agree and Continue," you agree to the Alexa Terms of
27   Use and authorize the creation, use, improvement, and storage of
       your voice ID. Learn more.

28

DECLARATION OF NEDIM FRESKO   - 24 -   FENWICK & WEST LLP
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                                                    SEATTLE, WASHINGTON 98101

1   *Id.* at AMZ_GARNER_00068033.

2   86.   Directly beneath this text is a blue "AGREE AND CONTINUE" button. The text

3   "Alexa Terms of Use" appears as a link in contrasting blue font. If a user taps on the "Alexa Terms

4   of Use" link, he or she is directed to the then-current version of the Alexa Terms, which incorporate

5   by reference the COUs and Privacy Notice. To create a Voice ID from this screen, the registrant

6   must proceed to tap "AGREE AND CONTINUE," thereby agreeing to the Alexa Terms, COUs,

7   and Privacy Notice.

8

9   I declare under penalty of perjury under the laws of the United States of America that the

10   foregoing is true and correct.

11   Executed on _9/14/2024_____.

12

13

14   _____
                              Nedim Fresko

15

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